1. What is the Key Concept for Section 2-1? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Main Idea: Living things consist of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of different elements.

Match the parts of an atom with their descriptions.

a. nucleus b. neutron c. proton electron

\_\_\_\_\_\_1. particle with a positive electrical charge

\_\_\_\_\_\_2. particle with a negative electrical charge

\_\_\_\_\_\_3. particle with no electrical charge

\_\_\_\_\_\_4. dense center of an atom

Circle the word or phrase that best completes the sentence.

5. Water (H2O) and carbon dioxide (CO2), are examples of *compounds* / *elements*.

6. *Elements* / *Compounds* are made up of only one type of atom.

Main Idea: Ions form when atoms \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ electrons.

**Choose whether the statement is true or false. IF the statement is false, correct the italicized word.**

\_\_\_\_\_\_7. An atom becomes an ion when its number of *protons* changes.

\_\_\_\_\_\_8. Some ions are positively charged, and some ions have *no charge*.

\_\_\_\_\_\_9. The formation of an ion results in a *full* outermost energy level.

\_\_\_\_\_\_10. Ions usually form when electrons are *transferred* from one atom to another.

**MAIN IDEA:** Atoms \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ pairs of electrons in covalent bonds.

Circle the word or phrase that best completes the sentence.

11. Shared pairs of electrons fill the *innermost* / *outermost* energy levels of bonded atoms.

12. Covalent bonds are generally very *strong* / *weak*.

13. Two atoms may form several covalent bonds to share several pairs of *protons* / *electrons*.

14. A molecule is held together by *ionic* / *covalent* bonds.

Vocabulary Check

|  |  |  |  |
| --- | --- | --- | --- |
| element | compound | ion | molecule |
| ionic bond | covalent bond | atom |  |

Write each word or phrase next to its definition.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 15. a substance made of atoms of different elements bonded together in a certain ratio

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 16. a particular type of atom

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 17. a bond formed by the electrical force between two ions of opposite charge

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 18. a bond formed when two atoms share a pair of electrons

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 19. the smallest basic unit of matter

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 20. two or more atoms held together by covalent bonds

21. Differentiate between an ionic bond and a covalent bond using the graphic organizer.

22. Evaluate the benefits and limitations of atomic models. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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23. Using the “Reading Toolbox” on page 41. Where does the word “covalent” come from? How does this word origin help to explain its meaning?

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24. Go to your online student edition of the text and go to “interactive review” and then on “self-checks”. Take the 2-1 Self-Check Quiz and record your score below. Write out the most difficult question and answer next to your score.

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